Hydrologic Forecast for Augusta/Elk Creek

CONDITIONS 04/26/2020

Lewis & Clark County Water Quality Protection District

SUMMARY
Elk Creek is a non-gauged stream, therefore USGS gauging station 0608220 (Sun River below Willow Cr) is used as a surrogate to evaluate the timing of spring runoff and can be used to track rising river stage in the area.

Streamflows have risen in the past week from warmer weather contributing to a melting snowpack. Temperatures are projected to reach the 60's to mid 70's over the next week which is expected to increase streamflows as snowpack melts. Overnight temperature is projected to be above freezing at lower elevations which may accelerate runoff. It is possible that segments of Elk Creek may experience unpredictable response to spring runoff due to infrastructure damage and/or channel disruptions from the events of 2018 and 1019.

Residents should keep track of weather patterns for increasing temperature and precipitation events which could change conditions quickly. With snowpack slightly above average levels for this time of year, intense and sustained snow-melt runoff is not expected, however precipitation events can contribute to flooding in any year, as evidenced in 2019.

The following data and information is used to evaluate hydrologic conditions in the Elk Creek drainage. Hydrologic response of Elk Creek is predominantly a result of three factors.

1. Surrogate **streamflow** measured at the Sun River below Willow Creek USGS Stream Gauging Station west of Augusta
   https://waterdata.usgs.gov/monitoring-location/06082200
2. **Snowpack** snow water equivalent (SWE) at the Wood Creek SNOTEL Station west of Augusta
   https://www.nwrfc.noaa.gov/snow/snowplot.cgi?WODM8
3. Short-term Augusta 5-day weather (**precipitation and temperature)** projection from the National Weather Service
   https://forecast.weather.gov/MapClick.php?lat=47.4927&lon=-112.3938#.XpooZUZKjGg

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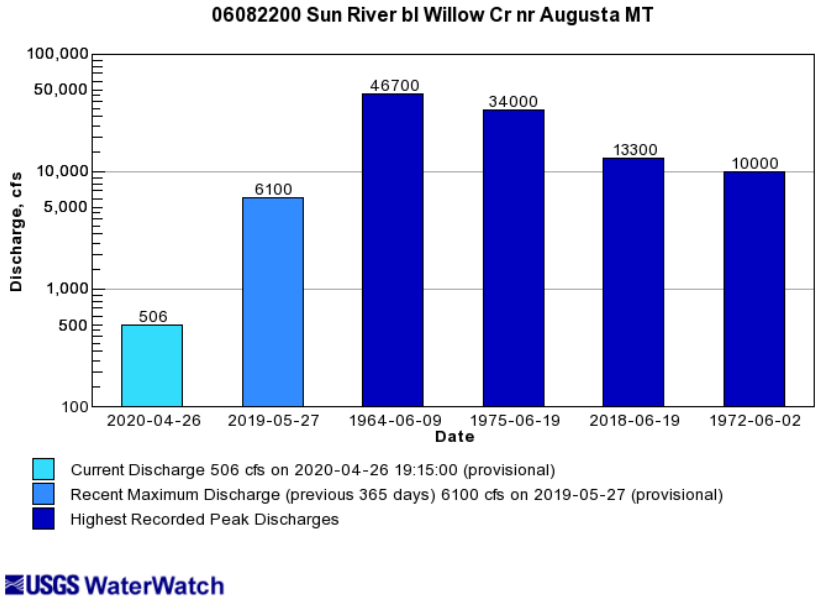
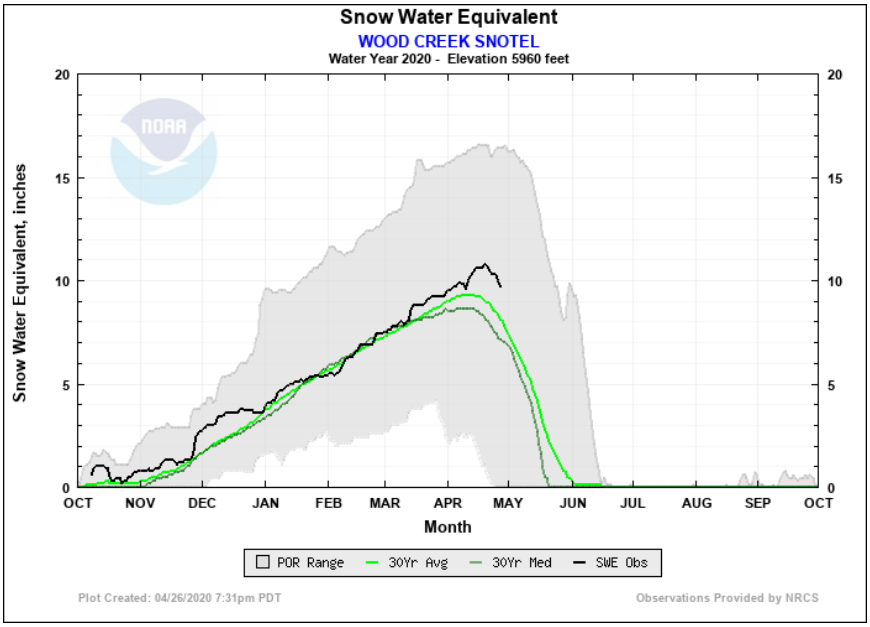
1. **STREAMFLOW**
   Streamflow on Sunday 04/26/20 was recorded at 506 CFS
   Median flow on 4/26 is 233 CFS
   On June 19th, 2018 streamflow peaked at 13,300 CFS
   On May 27th, 2019 streamflow peaked at 6,100 CFS



2. **SNOWPACK (SWE)**
   SWE at Wood Creek is at 9.8" which is slightly above average at 118%. 30-yr average SWE is 8.3".



3. **WEATHER**
   Monday through next Thursday...Above average temperature are expected throughout the week with mild instability producing some scattered showers throughout the region. Highs in the 60s and lower 70s are likely for lower elevations Monday through Thursday, with lows above freezing overnight.